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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/768,374	01/22/2001	Hemal V. Shah	10559-370001/P10176	2368

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FISH & RICHARDSON, PC
12390 EL CAMINO REAL
SAN DIEGO, CA 92130-2081

EXAMINER

CHANKONG, DOHM

ART UNIT	PAPER NUMBER
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2152

DATE MAILED: 12/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/768,374	SHAH ET AL.	
	Examiner	Art Unit	
	Dohm Chankong	2152	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 November 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>11/5/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1> Applicant's remarks and request for continued examination has been received and reviewed. Claims 1-30 are still presented for examination.

Response to Arguments

2> Applicant's arguments with respect to claims 1, 4-18 and 21-30 have been considered but are moot in view of the new ground(s) of rejection.

Allowable Subject Matter

3> The indicated allowability of claims 2, 3, 19 and 20 are withdrawn in view of the newly discovered reference(s) to Salo et al, U.S Patent No. 6,609,148 and Haviv, US 2002/0059451

A1. Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 102

4> The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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5> Claims 1 are rejected under 35 U.S.C § 102(e) as being anticipated by Haviv, U.S

Patent Publication No. 2002/0059451 A1.

6> As to claim 1, Haviv discloses a method comprising:

receiving a packet at a proxy node in a system area network from a first node that generated the packet using a first protocol [abstract | Figure 4 | Figure 5 | paragraphs 0014, 0016];

translating the packet using a second protocol used by a second node [paragraphs 0049, 0053]; and

sending the translated packet from the proxy node to the second node [Figure 1 | paragraphs 0053, 0054];

wherein the first and second protocols comprise first and second transport-layer, connection-oriented, byte stream based protocols, and the proxy node manages first and second endpoints corresponding to the first and second protocols [Figure 5 | paragraphs 0049, 0054, 0057 and 0059 where: Haviv's sockets direct protocol (SDP) is analogous to the second protocol].

7> As to claim 6, Haviv discloses the method of claim 1 wherein the first node comprises a network client coupled to the proxy node through a network node, and the second node comprises an application node [Figure 5 «items 52, 54, 56, 66, 70, 72» | paragraphs 0055, 0058 where: the gateway is analogous to a network node and the server is analogous to an application node].

8> As to claim 7, Haviv discloses the method of claim 1 wherein the first node comprises an application node and the second node comprises a network client coupled to the proxy node through a network node [Figure 5 «items 52, 54, 56, 66, 70, 72» | paragraphs 0035, 0051, 0055, 0058 where: Haviv's gateway is analogous to a network node and the server is analogous to an application node].

9> As to claim 8, Haviv discloses a method of protocol processing comprising:
receiving a packet at a proxy node in a system area network from a first node that generated the packet using a first protocol wherein the packet is addressed to a second node in the system area network that uses a second protocol [abstract | Figure 4 | Figure 5 | paragraphs 0014, 0016, 0049, 0053];

processing the packet in the proxy node [paragraph 0053]; and
sending a response from the proxy node to the first node using the first protocol, if said processing results in a determination that the packet need not be translated and sent to the second node [paragraph 0058];

wherein the first and second protocols comprise first and second transport-layer, connection-oriented, byte stream based protocols [Figure 5 | paragraphs 0049, 0054, 0057 and 0059 where: Haviv's sockets direct protocol (SDP) is analogous to the second protocol].

10> As to claim 11, Haviv discloses a system comprising:
a system area network comprising a network node, a proxy node, and an application

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node [Figure 5 «items 52, 54, 56, 66, 70» | paragraphs 0014, 0019, 0053 and 0054 where: Haviv's gateway is analogous to a network node and server is analogous to an application node] and

a network client [Figure 5 «item 52» | paragraph 0053];

wherein the proxy node comprises a processor configured for:

receiving a first packet from the network client through the network node addressed to the application node using a first protocol [paragraphs 0053, 0058]; and

if the first packet meets a specified criterion, translating the first packet using a second protocol used by the application node, and sending the translated first packet to the application node [paragraph 0053];

wherein the first and second protocols comprise first and second transport-layer, connection-oriented, byte stream based protocols [Figure 5 | paragraphs 0049, 0054, 0057 and 0059 where: Haviv's sockets direct protocol (SDP) is analogous to the second protocol].

11> As to claim 12, Haviv discloses the system of claim 11 wherein the proxy node processor is further configured for processing the first packet if the first packet does not meet the specified criteria [paragraph 0022, 0023 and 0056 where: whether or not the data is received from a trusted client is analogous to the criteria].

12> As to claim 13, Haviv discloses the system of claim 12, wherein the proxy node processor is further configured for sending a response to the network client through the

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network node using the first protocol, the response being in reply to the first packet if the first packet does not meet the specified criteria [paragraph 0058].

13> As to claim 14, Haviv discloses the system of claim 11 wherein the proxy node processor is further configured for receiving a second packet from the application node addressed to the network client using the second protocol [paragraph 0035, 0049];

if the second packet meets a specified criterion, translating the second packet using the first protocol and sending the translated second packet to the network client through the network node [paragraph 0016, 0053].

14> As to claim 15, Haviv discloses the system of claim 14 wherein the proxy node processor is further configured for processing the second packet if the second packet does not meet the specified criteria [paragraphs 0022, 0055 and 0056].

15> As to claim 16, Haviv discloses the system of claim 15, wherein the proxy node processor is further configured for sending a response to the application node using the second protocol, the response being in reply to the second packet if the second packet does not meet the specified criteria [paragraphs 0018, 0023, 0028 and 0031].

16> As to claim 18, Haviv discloses the system of claim 11 further comprising a plurality of network clients, and wherein the system area network comprises a plurality of network nodes, a plurality of proxy nodes and a plurality of application nodes, wherein each proxy

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node [Figure 1 | Figure 5 | paragraphs 0014, 0019, 0054], comprises a respective processor configured for:

received an input packet from one of the network clients through one of the network nodes addressed to a particular one of the application nodes using a first protocol [paragraphs 0053, 0058]; and

if the input packet meets a specified criterion, translating the input packet used by the particular application node, and sending the translated first packet to the particular application node [paragraph 0053].

17> As to claim 21, Haviv discloses an apparatus comprising:

a plurality of network ports [Figure 5 | paragraph 0056]; and

a processor configured for:

receiving through one of the network ports a first packet from a network client through a network node in a system area network that generated the first packet using a first protocol [paragraphs 0053, 0056]; and

if the first packet meets a specified criterion, translating the first packet using a second protocol used by the application node, and sending the translated first packet through one of the network ports to the application node [paragraphs 0053 and 0056];

wherein the first and second protocols comprise first and second transport-layer, connection-oriented, byte stream based protocols [Figure 5 | paragraphs 0049, 0054, 0057 and 0059 where: Haviv's sockets direct protocol (SDP) is analogous to the second protocol].

18> As to claim 22, Haviv discloses the apparatus of claim 21 wherein the processor is further configured for processing the first packet and sending a response to the network client through the network node using the first protocol if the packet does not meet the specified criterion, the response being in reply to the first packet [paragraph 0058].

19> As to claim 23, Haviv discloses the apparatus of claim 21 wherein the processor is further configured for:

receiving a second packet through one of the network ports from the application node addressed to the network client using the second protocol [Figure 5 «items 54, 56» | paragraph 0035, 0049, 0056];

if the second packet meets a specified criterion, translating the second packet using the first protocol and sending the translated second packet to the network client through the network node [paragraph 0016, 0053].

20> As to claim 24, Haviv discloses the apparatus of claim 23 wherein the processor is further configured for processing the first packet and sending a response to the application node using the second protocol if the second packet does not meet the specified criteria, the response being in reply to the first packet [paragraphs 0018, 0023, 0028].

21> As to claim 25, Haviv discloses the apparatus of claim 121, wherein the processor is further configured for performing load balancing among the application nodes connected to

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~ the network ports based on application processing requirements [Figure 5 | paragraphs 0021, 0022 and 0036].

22> As to claim 27, Haviv discloses the apparatus of claim 21 wherein the first protocol is based on Transmission Control Protocol/Internet Protocol (TCP/IP) [paragraph 0053].

23> As to claim 28, as it is merely an article that implements the steps of the method of claim 11, it does not teach or further define over the limitations of claim 11. Therefore claim 28 is rejected for the same reasons set forth in claim 11, supra.

24> As to claim 29, as it is merely an article that implements the steps of the methods of claims 12 and 13, it does not teach or further define over the limitations of claims 12 and 13. Therefore claim 28 is rejected for the same reasons set forth in claims 12 and 13, supra.

25> As to claim 30, Haviv discloses the article of claim 28 further comprising instructions for causing the computer system to:

receive a second packet at the proxy node from the application node using the second protocol [paragraphs 0018, 0035];

translate the second packet using the first protocol [paragraphs 0016, 0049 and 0054];
and

send the translated second packet to the network client through the network node [Figure 1 | paragraphs 0023, 0051].

Claim Rejections - 35 USC § 103

26> The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

27> Claims 2 and 3 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Haviv, in view of Salo et al, U.S. Patent No. 6,609,148 ["Salo"].

28> As to claim 2, Haviv does not specifically disclose the method of claim 1 wherein translating the packet comprises translating a single packet into multiple packets and wherein sending the translated packet comprises sending several translated packets.

29> Salo discloses a method wherein translating the packet comprises translating a single packet into multiple packets and wherein sending the translated packet comprises sending several translated packets [abstract | column 4 «lines 2-5 and 21-28» | column 7 «lines 56-59» | column 14 «lines 24-33» | claim 1]. Salo's translation method (converting a single request to multiple requests) allows multiple requests to be sent as one higher level request, thereby increasing network communication efficiency between the nodes in the network. Therefore, it would have been obvious to one of ordinary skill in the art to incorporate Salo's packet

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translation functionality into Haviv's packet translation method for the obtained advantages taught by Salo.

30> As to claim 3, Haviv does not specifically disclose the method of claim 1 wherein receiving the packet comprises receiving multiple packets, translating the packet comprises translating the multiple packets into a single packet and sending the translated packet comprises sending the single translated packet [abstract | column 3 «line 64» to column 4 «line 2» | column 4 «lines 17-21» | column 7 «lines 56-59» | column 14 «lines 33-37» | claim 1]. Salo's translation method allows aggregating multiple requests into a single request, thereby increasing network communication efficiency between the nodes in the network. Therefore, it would have been obvious to one of ordinary skill in the art to incorporate Salo's packet translation functionality into Haviv's packet translation method for the obtained advantages taught by Salo.

31> Claims 4, 5, 9, 10, 17 and 26 are rejected under 35 U.S.C § 103(a) as being unpatentable over Haviv, in view of Speight et al, 4th USENIX Windows Systems Symposium Paper 2000, Pp. 113-124 of the Proceedings, August 3-4, 2000 ["Speight"].

32> Speight was cited by Applicant in the final rejection Office Action, dated 9.2.2004.

33> As to claim 4, Haviv discloses the method of claim 1 wherein the first protocol is based on Transmission Control Protocol/Internet Protocol (TCP/IP) and the second

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protocol is a system area network protocol [paragraphs 0019, 0049 and 0054 where: Sockets Direct Protocol (SDP) is a known system area network protocol and the VI architecture is an example of system area network architecture] but does not specifically disclose that the second protocol is lightweight.

34> Speight discloses a Windows Socket Direct Lite, a streamlined version of the standard Windows SDP [abstract | "Introduction"]. As is well known in the art, a lightweight protocol increases network performance and efficiency by reducing resource utilization. Therefore, it would have been obvious to one of ordinary skill in the art to incorporate Speight's lightweight alternative to Haviv's sockets direct protocol for the stated advantages.

35> As to claim 5, Haviv discloses the method of claim 1 wherein the first protocol is based on a system area network protocol and the second protocol is based on Transmission Control Protocol/Internet Protocol (TCP/IP) [paragraphs 0035, 0038, 0049 and 0054]. Haviv does not specifically disclose a lightweight, system area network.

36> Speight discloses a Windows Socket Direct Lite, a streamlined version of the standard Windows SDP [abstract | "Introduction"]. As is well known in the art, a lightweight protocol increases network performance and efficiency by reducing resource utilization. Therefore, it would have been obvious to one of ordinary skill in the art to

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incorporate Speight's lightweight alternative to Haviv's sockets direct protocol for the stated advantages.

37> As to claims 9 and 10, as they do teach or further define over the limitations of claims 4 and 5, respectively, they are rejected for the same reasons set forth in claims 4 and 5, supra.

38> As to claim 17, as it is merely a system that implements the step of the method of claim 4, it does not teach or further define over the limitations of claim 4. Therefore, claim 17 is rejected for the same reasons set forth in claim 4, supra.

39> As to claim 26, as it is merely an apparatus that implements the step of the method of claim 5, it does not teach or further define over the limitations of claim 5. Therefore, claim 26 is rejected for the same reasons set forth in claim 5, supra.

40> Claims 19 and 20 are rejected under 35 U.S.C § 103(a) as being unpatentable over Haviv, in view of Squire et al, U.S Patent No. 6,745,243 ["Squire"].

41> As to claim 19, Haviv discloses the system of claim 18, wherein each network node comprises a processor configured for performing load balancing among the proxy nodes [paragraphs 0033, 0047 and 0055] but does not specifically disclose that the load balancing is based on protocol processing requirements.

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42> Squire discloses load balancing based on protocol processing requirements [column 4 «lines 22-41» | column 6 «lines 52-62»] by being able to load balance network traffic based on layer 3, layer 4 and layer 5 information for the obtained advantage of improving efficiency and available bandwidth of the network. Therefore it would have been obvious to one of ordinary skill in the art to have implemented Haviv's load balancing as Squire's protocol-based load balancing for the stated advantages.

43> As to claim 20, Haviv discloses the system of claim 19, wherein the proxy node processors are further configured for performing load balancing among the application nodes based on application processing requirements [paragraphs 0021, 0022 and 0036].

Conclusion

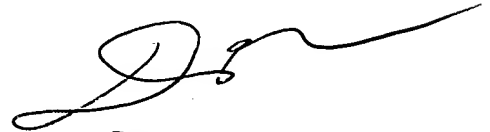
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dohm Chankong whose telephone number is (571)272-3942. The examiner can normally be reached on 8:00AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenton Burgess can be reached on (571)272-3949. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DC



Dung C. Dinh
Primary Examiner